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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,660

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EXAMINER

TREIDL, JESSICA I

ART UNIT

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1796

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,660	<b>Applicant(s)</b> SANAI, YASUYUKI	
	<b>Examiner</b> JESSICA TREIDL	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al (US 5,969,867).

Regarding claims 7 and 9-15, Fukushima et al teach an active ray-curable composition (Abstract) comprising an active energy ray-sensitive radical polymerization initiator (5:4-5) {photoinitiator}, bis(4-(meth)acryloyloxyphenyl) sulfide (Structure II 5:55-6:15, wherein Z=S, p & q=0, n & m=0; reference component B-1), and 2-phenylphenyl(meth)acrylate (8:2; reference component B-2) {o-phenylphenyl acrylate}. Selecting p & q=0, n & m=0 and R<sup>2</sup> to be hydrogen would be a natural starting point for one of ordinary skill in the art at the time of the invention attempting to reproduce the findings of the prior art by first formulating the simplest structure. Additionally, the selection of Z being sulfide, requires nothing more than choosing one of four equivalent options (6:10-15), and with the advent of combinatorial chemistry and microarray technology it would not have required undue experimentation to arrive at bis(4-(meth)acryloyloxyphenyl) sulfide.

Regarding claim 8, Fukushima et al teach the composition comprising 10-90 parts by weight of instant structure (1) (7:3-5, wherein instant structure (1) is equivalent to reference component (B-1)) and 1-50 parts by weight of instant structure (2) (8:15-17, wherein instant structure (2) is equivalent to reference component (B-2)). Furthermore, the reference teaches the composition specifically containing 19.6 wt % and 34.3 wt % of instant structure (1) and instant structure (2), respectively, per examiner's calculations (Table 2 Ex. 11, reference component (B-1) is equivalent to instant structure (1) & reference component (B-2) is equivalent to instant structure (2)).

Regarding claim 16, Fukushima et al teach the cured composition having a refractive index of 1.62 or higher (9:39), however the reference is silent to the temperature at which the refractive index is measured. Additionally, the reference teaches the refractive index of equivalent compositions being higher than 1.62 at 20°C (Table 2 Ex. 8, 9, 11, 12 & 13, 10:64). The Office realizes that all the claimed effects or physical properties are not positively stated by the reference. However, the reference teaches all of the claimed reagents. Therefore, the claimed effects and physical properties, i.e. a refractive index of 1.61 or higher at 25 °C, would inherently be achieved by a composition with all the claimed ingredients. If it is the applicants' position that this would not be the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties and effects with only the claimed ingredients.

Regarding claim 17, Fukushima et al teach the active energy ray-curable composition as a lens sheet (Abstract).

Claims 18-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al (US 5,969,867).

Regarding claims 18 and 20-26, Fukushima et al teach a method for producing a lens sheet comprising casting an active energy ray-curable composition into a lens mold and irradiating for curing (9:7-16). Furthermore, Fukushima et al teach the active ray-curable composition (Abstract) comprising an active energy ray-sensitive radical polymerization initiator (5:4-5) {photoinitiator}, bis(4-(meth)acryloyloxyphenyl) sulfide (Structure II 5:55-6:15, wherein  $Z=S$ ,  $p \text{ \& } q=0$ ,  $n \text{ \& } m=0$ ; reference component B-1), and 2-phenylphenyl(meth)acrylate (8:2; reference component B-2) {o-phenylphenyl acrylate}. Selecting  $p \text{ \& } q=0$ ,  $n \text{ \& } m=0$  and  $R^2$  to be hydrogen would be a natural starting point for one of ordinary skill in the art at the time of the invention attempting to reproduce the findings of the prior art by first formulating the simplest structure. Additionally, the selection of Z being sulfide, requires nothing more than choosing one of four equivalent options (6:10-15), and with the advent of combinatorial chemistry and microarray technology it would not have required undue experimentation to arrive at bis(4-(meth)acryloyloxyphenyl) sulfide.

Regarding claim 19, Fukusima et al teach the composition comprising 10-90 parts by weight of instant structure (1) (7:3-5, wherein instant structure (1) is equivalent to reference component (B-1)) and 1-50 parts by weight of instant structure (2) (8:15-17,

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wherein instant structure (1) is equivalent to reference component (B-2)). Furthermore, the reference teaches the composition specifically containing 19.6 wt % and 34.3 wt % of instant structure (1) and instant structure (2), respectively, per examiner's calculations (Table 2 Ex. 11, reference component (B-1) is equivalent to instant structure (1) & reference component (B-2) is equivalent to instant structure (2)).

### ***Response to Arguments***

The objections to the abstract and claim 15 have been withdrawn, as the abstract and claim 15 have been amended to overcome the objections.

In regards to Applicant's statement that "Formula (B-1) in Fukushima et al is quite broad and cannot be fairly said to anticipate the present invention," the Applicant has not specifically explained in what ways Formula (B-1) is broad. However, the 102 (b) rejection over Fukushima et al has been withdrawn, because arriving at the structure of instant formula (1) from formula (B-1) of Fukushima et al requires picking and choosing from multiple lists, i.e. choosing Z to be sulfide from 4 options, choosing n/m to be zero from approximately 11 options, choosing R<sup>2</sup> to be hydrogen from 2 options, and choosing p/q to be zero from 3 options (see rejection above for further detail). Upon further consideration the instant claims have been rendered obvious over Fukushima et al (see rejection above).

Regarding Applicant's statement that Example 11 in Fukushima et al uses BPA-5, which is not defined in the specification but is believed to be BPM-5 or BPA-2, is not within the scope of formula (1) because neither BPM-5 nor BPA-2 contains a sulfur

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atom, it is unclear to the Examiner the relevance of the statement. If it pertains to the rejection of claims 8 and 19, it is reiterated that BPA-5 (BPM-5) is used as the component B-1, and is interchangeable with other compounds of component B-1, those described by reference formula II, and the structure of instant formula (1) is taught by reference formula II (see rejection of claim 1 above).

Regarding the claim of unexpected results, the declaration under 37 CFR 1.132 filed 12/15/2008 is insufficient to prove unexpected results. Although the Examiner acknowledges that BAPS is a reasonable representative compound of the instant formula (1), the MPSMA compound used to represent the compound of the closest prior art is insufficient and not commensurate with the scope of the prior art. MPSMA is used to as reference component A in the examples of Fukushima et al, not B-1, the component used in the previous and current rejections to anticipate/obviate the instant formula 1. Instead, the closest specific structure listed for reference B-1 is bis(4-(meth)acryloyloxydiethoxyphenyl)sulfide (6:46-47). The experiments presented in the declaration, wherein MPSMA is replaced with bis(4-(meth)acryloyloxydiethoxyphenyl)sulfide, would be appropriate to demonstrate unexpected results.

Regarding Applicant's claim that "there is no disclosed advantage in the cited art which would have motivated one to modify the copending claims to arrive at the present invention", pertaining to the obviousness-type double patenting rejection, Examiner acknowledges that Fukushima et al do not explicitly teach an advantage to the structure wherein the alkoxy side groups are not present, accordingly the obviousness-type double patenting rejection has been withdrawn.

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***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA TREIDL whose telephone number is (571)270-3993. The examiner can normally be reached on Monday- Thursday, 7:30AM- 5PM EST, Alt. Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.T./  
/1.02.09/

/Sanza L McClendon/

Primary Examiner,

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